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## PATENTE DE INVENCION

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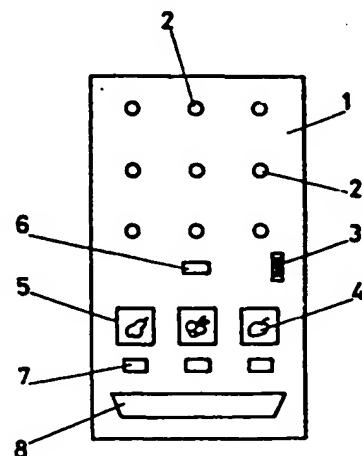
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(54) Título: Perfeccionamientos en máquinas recreativas.

(57) Resumen

Aplicables en aquellas máquinas que se activan mediante monedas para otorgar premios en monetario, basándose en una serie de rodillos o displays observables a través de visores previstos en la carátula de la máquina, siendo optativamente controlable la secuencia de aparición de los símbolos en los visores mediante el accionamiento de pulsadores. Los perfeccionamientos consisten en que la máquina incorpora además una segunda opción de juego basada en unos indicadores luminosos que se distribuyen ortogonalmente, y son activados de un modo aleatorio y en rápida sucesión por el propio programa de la máquina, cuando en los visores aparece un símbolo determinado o una combinación concreta, y siempre supeditada dicha activación a la introducción de monedas en el respectivo monedero. La secuencia de activación de los indicadores luminosos es detenible mediante un pulsador accionable por el propio jugador, de manera que al final de la secuencia quedarán encendidos unos determinados indicadores que, si completan una línea o queda encendido un indicador concreto, se obtendrá un premio extra.



## DESCRIPCION

La vigente Ley de Patentes, establece como patentables las invenciones nuevas que impliquen una actividad inventiva y sean susceptibles de aplicación industrial (Art. 4-1).

La invención se considera nueva cuando no están anticipada en el estado actual de la técnica, es decir, cuando no está comprendida en todo lo que, antes de la fecha de presentación de la solicitud de la nueva Patente, era accesible al público, en España, cuando se trata de Modelos de Utilidad, o en España y en el extranjero, cuando se trata de Patentes de Invención. Igualmente se considera comprendido en el estado actual de la técnica el objeto de las solicitudes, tanto de Patentes de Invención, como de Modelos de Utilidad, cuya fecha de presentación sea anterior a la fecha de presentación de la nueva solicitud, siempre que dichas solicitudes anteriores hayan sido o vayan a ser publicadas posteriormente. (Art. 8).

La invención se considera que tiene actividad inventiva, si la misma no se deduce del estado actual de la técnica de una manera evidente (cuando se trata de Patente de Invención), o de una manera muy evidente (cuando se trata de Modelos de Utilidad), enjuiciado por un experto en la materia (Arts. 8-1 y 146-1).

Finalmente, se considera que una invención es susceptible de aplicación industrial cuando su objeto puede ser fabricado o utilizado en cualquier clase de industria, incluida la agricultura.

Pues bien, a tenor de lo expuesto, y en base al articulado que recoge los conceptos expresados, debe considerarse que la invención a la que se refiere la presente memoria, reúne las condiciones de novedad, actividad inventiva y aplicación industrial exigidas, siendo merecedora por consiguiente de la patente que se solicita, y de los derechos de fabricación exclusiva, comercialización, utilización, ofrecimiento e introducción en el comercio que la Ley vigente reconoce (Arts. 50, 51 y 152 de la Ley de Patentes de 20 de marzo de 1986).

La presente invención, según se expresa en el enunciado de esta memoria descriptiva, se refiere a unos perfeccionamientos en máquinas recreativas, en base a los cuales de máquina en cuestión ofrece una serie de prestaciones complementarias del juego básico que proporciona dicha máquina.

Actualmente existen máquinas recreativas que son actividades mediante monedas y que otorgan premios en metálico, máquinas que cuentan con una serie de rodillos o displays observables desde el exterior a través de correspondientes visores previstos en la carátula de la propia máquina.

Los símbolos que aparecen en los visores al final de cada jugada, establecen una determinada combinación con posible premio, el cual será vertido en una bandeja, de manera tal que la secuencia de aparición de los símbolos en los visores es optativamente controlable mediante el accionamiento de correspondientes pulsadores previstos igualmente en la citada carátula.

Es decir en este tipo máquinas, tras la introducción de las correspondientes monedas, los rodillos o displays van cambiando hasta alcanzar un combinación final susceptible de dar origen a un premio, finalizando ahí las prestaciones de la máquina, sin posibilidad de ésta pueda

proporcionar otras prestaciones que pudieran dar opción otro u otros premios.

Pues bien, teniendo en cuenta lo anteriormente expuesto los perfeccionamientos introducidos en el tipo de máquinas recreativas citadas, tienen por finalidad el que complementariamente a la prestación básica que ofrece la máquina, de acuerdo con lo que se ha expuesto, proporcione asimismo una prestación nueva de juego con opción a premio.

Basicamente los aludidos perfeccionamientos se caracterizan porque en la carátula de la máquina se ha previsto una distribución, preferentemente ortogonal, de una pluralidad de indicadores luminosos que son activados aleatoriamente y en rápida sucesión por el programa de la máquina, estando supeditada la referida sucesión a la introducción de monedas, o a la aparición de un símbolo determinado en los visores de posible juego principal basado en los rodillos o displays ya comentados.

Esta secuencia de activación de los indicadores luminosos, como la nueva prestación que ofrece la máquina de acuerdo con los perfeccionamientos que se preconizan, es vetajosamente susceptible de detenerse mediante un pulsador accionado por el propio jugador, todo ello de manera tal que la activación de unos determinados indicadores luminosos, individualmente, y en combinación mútua, establezcan un posible premio independiente al que puede conseguirse mediante el juego principal o básico de la máquina.

Para complementar la descripción que seguidamente se va a realizar y con objeto de ayudar a una mejor compresión de las características del invento, se acompaña a la presente memoria descriptiva de una hoja única de planos en la que se muestra de forma esquemática el frente o carátula de una máquina recreativa con los visores a través de los cuales se dejan ver los correspondientes símbolos, los pulsadores para poder controlar la secuencia de aparición de estos últimos, así como las bandeja de recogida de los premios, y en cuya carátula se observan asimismo los indicadores luminosos que forman parte del objeto de la invención, así como la ranura para acceder al juego que van a ofrecer estos indicadores luminosos y por supuesto el pulsador accionable por el propio jugador, y mediante cuyo pulsador es posible detener la secuencia de activación de los aludidos indicadores luminosos.

A la vista de la comentada figura, puede observarse como una carátula 1 convencional de una máquina recreativa, incorpora una distribución de indicadores luminosos 2, dispuestos preferentemente según alineaciones ortogonales entre sí, que son activados aleatoriamente y en rápida sucesión por el propio programa de la máquina, estando supeditada la referida sucesión a la introducción de monedas a través del receptor o monedero 3.

Esta carátula de la máquina incorpora además los elementos básicos y convencionales de este tipo de máquinas recreativas, como son una serie de símbolos 4 que aparecen en los visores 5 al final de cada jugada, estableciéndose una determinada combinación con posible premio, el cual será vertido en la correspondiente bandeja 8, siendo optativamente controlable la secuencia de aparición

de los símbolos 4 en los visores 5 mediante el accionamiento de respectivos pulsadores 7.

En base a estas características básicas y como ya se ha expuesto, los perfeccionamientos de la invención consisten en que además de los visores 5 citados y previstos en la carátula de la máquina, existen o se disponen los indicadores luminosos 2 distribuidos ortogonalmente, indicadores que son activados de un modo aleatorio y en rápida sucesión por el propio programa de la máquina, cuando en los visores 5 aparece un símbolo 4 determinado o una combinación concreta, y siempre supeditada dicha activación a la introducción de

las monedas correspondientes en el receptor o monedero 3.

La secuencia de activación de los indicadores luminosos 2 es detenible mediante un pulsador 6 que es accesible desde el exterior para que el propio jugador pueda influir en el resultado final, de manera que al final de la secuencia quedarán encendidos unos determinados indicadores 2 que, si complementan una línea o queda encendido un indicador concreto, se obtendrá un premio extra, estableciéndose así un juego auxiliar que será complementario al juego principal a básico determinado por los símbolos 4.

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**REIVINDICACIONES**

1. Perfeccionamientos en máquinas recreativas, del tipo accionado por monedas y que otorga premios en metálico, los perfeccionamientos caracterizados esencialmente porque en la carátula de la máquina se ha previsto una distribución, preferentemente ortogonal, de indicadores luminosos que son activados aleatoriamente y en rápida sucesión por el programa de la máquina, estando supeditada la referida sucesión a la introducción de monedas, o a la aparición de un símbolo determinado en los visores del posible juego principal a base de rodillos o displaya.

2. Perfeccionamientos en máquinas recreativas, según reivindicación anterior, caracterizados esencialmente porque la secuencia de activación de los indicadores luminosos es ventajosamente detenible mediante un pulsador accionado por el propio jugador.

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3. Perfeccionamientos en máquinas recreativas, según reivindicaciones anteriores, caracterizados esencialmente porque la activación de unos determinados indicadores luminosos, individualmente o en combinación mútua, establecen un posible premio, independiente al que puede conseguirse mediante el juego principal.

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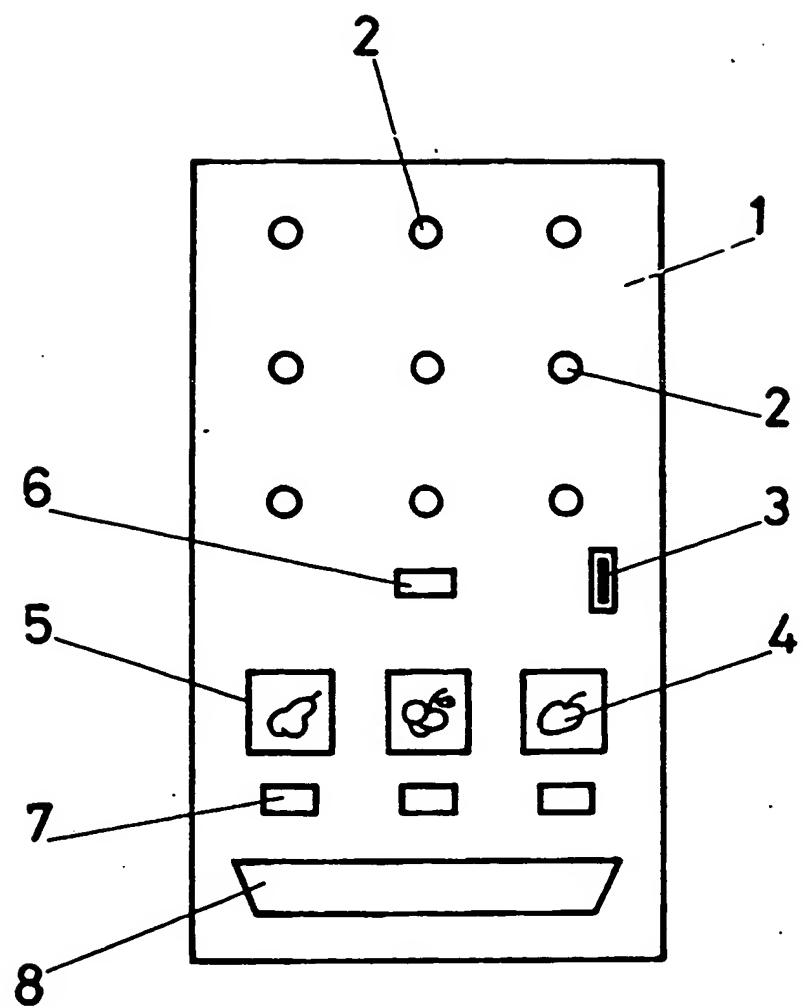
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**19. REGISTRY OF INDUSTRIAL  
PROPERTY  
SPAIN**

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**PATENT FOR INVENTION**

**A6**

**22. Submission Date: 04-05-88**

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**74: Agent: Ungria Goiburu, Bernardo**

**54. Title: Improvements on recreational machines**

**57. Background:**

Applicable to coin-operated machines that award prizes in coins, based on a series of rollers or displays visible through windows located on the front panel of the machine and which offer the option of using pushbuttons to control the order in which symbols appear in the windows. Improvements consist of adding a second playing option to the machine based on orthogonally distributed luminous indicators that are lit up at random and in rapid succession by the machine program whenever a specific symbol or combination appears in the windows, with operation always dependent on coins being inserted into the coin box. The sequential lighting up of the indicators can be stopped by a pushbutton that the player can operate, so that at the end of the sequence certain specific indicators will be lit up, as a result of which, if a row is completed or a specific indicator lit, an extra prize will be obtained.

[figure]

## DESCRIPTION

Under the current Patent Law, new inventions are considered patentable when they involve an inventive activity and are susceptible to industrial application (Art. 4-1).

An invention is considered new when it has not been foreseen in the current state of technology, i.e. when it does not form part of anything accessible to the public prior to the date the new Patent is applied for, in Spain with regard to Utility Models, or in Spain and abroad, with regard to Patents for Invention. The object of application, for Patents for Invention as well as Utility Models whose date of submission precedes that of the new application, is also considered to be included in the current state of technology, provided that such previous applications have been or will be subsequently published (Art. 6).

The invention is considered to have inventive activity if it cannot be obviously deduced from the current state of technology (in instances of Patent for Invention), or very obviously (in the case of Utility Models), in the opinion of an expert in the field (Arts. 8-1 and 146-1).

Lastly, an invention is considered to be susceptible to industrial application whenever its object can be manufactured or utilized in any type of industry, to include agriculture.

Bearing the above in mind, and based on the concepts of the above articles, the invention referred to in this document should be considered as meeting the necessary conditions for novelty, inventive activity and industrial application, thus deserving of the patent applied for and the rights to exclusive manufacturing, marketing, use, offer and introduction into trade as recognized under current law (Arts. 50, 51 and 152 of the Patent Law of March 20, 1986).

The present invention, as described in the introduction to this description, refers to certain improvements in recreational machines, based on which the machine in question offers a number of playing possibilities in addition to the basic game provided by this machine.

Currently there are coin-operated recreational machines that award prizes in coins, which contain a series of rollers or displays visible from outside through windows located on the front panel of the machine.

The symbols that appear in the windows at the end of each play establish a set combination with a possible prize, which will be deposited in a tray, in such a way that there is an option whereby the order in which the symbols appear in the windows can be controlled by pressing the corresponding buttons also located on the aforementioned front panel.

In other words, by inserting coins into this type of machine the rollers or displays proceed to change until reaching an ultimate combination that may produce a prize, whereupon the machine terminates its operation with no chance of its offering other operations that could result in one or more prizes.

Accordingly, taking the above into consideration, the improvements made to the abovementioned type of recreational machine are intended to supplement the basic operation of the machine, as referred to, by providing an additional, new manner of playing that gives an option to a prize.

The basic characteristics of these improvements involve a number of luminous indicators that have been placed on the front panel of the machine, preferably in an orthogonal arrangement, and which are lit up at random and in rapid succession by the machine program, this succession being predicated on the insertion of coins, or the appearance of a specific

symbol in the windows of the possible main game, based on the rollers or displays previously mentioned.

The order in which the indicators are lit up, and the new playing option offered by the machine in keeping with the improvements in question, has the advantage that it can be stopped by using a pushbutton operated by the player, so that by individually lighting up certain specified indicators, individually and all together, there is the chance of a prize apart from any that can be obtained through the main or basic game of the machine.

To expand on the definition as given below, and to aid in further understanding the characteristics of the invention, one page of drawings has been attached to this description with a schematic view of the front panel of a recreational machine with the windows through which the corresponding symbols can be seen, the pushbuttons for controlling the order in which these symbols appear, and the tray where prizes are deposited. The front panel also contains the luminous indicators included in the object of the invention, as well as the slot for gaining access to the game provided by these luminous indicators, and naturally the pushbutton that the player can operate to halt the sequence in which these luminous indicators light up.

In reference to the drawing, we can see a conventional front panel (1) for a recreational machine, with an array of luminous indicators (2), preferably in an orthogonal arrangement, which are lit up at random and in rapid succession by the machine program, this succession being predicated on the insertion of coins through the slot or coin box (3).

This front plate on the machine also incorporates the basic, conventional elements for this type of recreational machine, such as a series of symbols (4) that appear in the windows (5) at the end of each play, creating a specific combination with the possibility of a prize that will be deposited into the tray (8), with the option of controlling the order in which the symbols (4) appear in the windows (5) by operating the respective pushbuttons (7).

In light of these basic characteristics, as explained above, the improvements pertaining to the invention, in addition to the abovementioned windows (5) on the front panel of the machine, there are also luminous indicators (2) orthogonally distributed, which are operated at random and in rapid succession by the machine program whenever a specific symbol (4) or combination appears in the windows (5), with this operation always predicated on inserting the corresponding coins into the receptacle or coin box (3).

The sequence in which the indicators (2) light up can be stopped by a pushbutton (6), accessible from the outside so that the player can influence the final result. Therefore, upon conclusion of the sequence, certain indicators (2) will remain lit and, if a row is completed or a specific indicator lit, an extra prize will be awarded, thereby creating an auxiliary game in addition to the main, basic one determined by the symbols (4).

**CLAIMS**

1. Improvements to coin-operated recreational machines that award prizes in coins, said improvements essentially characterized by a front panel whereupon luminous indicators have been placed, preferably in an orthogonal arrangement, that are lit up randomly and in rapid succession by the machine program, said succession being predicated on the insertion of said coins, or the appearance of a specific symbol in the windows of the possible main game, based on rollers or displays.

2. Improvements to recreational machines of claim 1, wherein the sequence in which said luminous indicators are lit has the advantage that it can be stopped by a pushbutton operated by the player.

3. Improvements to recreational machines of claims 1 and 2, wherein when certain specific indicators are lit up, individually or all together, a possible prize is created, apart from the one obtainable by playing the main game.

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[figure]

Industrial Property Record Office

[illegible]  
Date of Presentation  
June 21, 1983

**Invention Patent**

SPAIN		6915
		2506915
PRIORITIES NUMBER	DATE	COUNTRY
PUBLICATION DATE	INTERNATIONAL CLASSIFICATION	[illegible]
	G07F17/34	

NAME OF THE INVENTION

**IMPROVED ENTERTAINMENT MACHINE**

PETITIONER  
SEGA S.A.

ADDRESS OF PETITIONER  
Ctra. de Toledo Km 22,900 PARLA (MADRID)

INVENTOR  
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BENEFICIARY  
The Petitioner

REPRESENTATIVE  
MR. JULIO HERRERO ANTOLIN

TO BE USED AS FIRST PAGE OF THE NOTE

JUNE 16, 1985

ANCHOR 16099

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Improved gaming machine.

Fig. Only page

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#### IMPROVEMENTS TO AN ENTERTAINMENT MACHINE.

Consisting of: including in the screen a number of indicators (5) showing graphs which reflect step-by-step the different values of obtainable prizes; including in the machine's control circuitry an auxiliary circuit which, by means of the actuating pushbuttons (7,8) and in the event that it detects a prize situation, enables variation in plus or minus in order to increase the prize value; and including an auxiliary indicator (6) and a second auxiliary indicator (9) to show the result determined by the auxiliary circuit after actuation of pushbuttons (7, 8).

## DESCRIPTIVE REPORT

This invention refers, as stated in this descriptive report, to an entertainment machine which has been substantially improved in order to increase its functional characteristics.

The machine proposed by the invention is of the type that include a set of drums or simulated drums, which bear symbols capable of establishing different prize-winning combinations.

As it is well known, when a coin is dropped into one of these machines, the "drums" are set in motion and stopping these determines a combination, preestablished by the machine control program, there being corresponding pushbuttons for stopping the drums—although in reality such pushbuttons have no incidence whatsoever on the final combination.

Improvements proposed by the invention aim towards an "extension" of the game with a higher participation of the player.

In that sense, in addition to the conventional indicators corresponding to the possible prize-winning combinations, the machine includes in its screen another series of indicators corresponding to the different values relative to different prizes, in such a way that when a prize-winning combination is obtained, the indicator corresponding to the value obtained is illuminated. An additional indicator, preferably showing the "+" and "-" symbols or any other type of reference to the complementary play described below, will also be illuminated telling the player that

starting from the prize obtained, he can try to increase it by pressing an auxiliary pushbutton, with the risk of obtaining a lower prize instead.

Obviously, the machine will offer this chance only when the prize obtained is not a limit prize, that is, that it is neither the maximum nor the minimum prize.

Pressing such pushbutton starts up an auxiliary circuit within the machine, so that the initially-obtained prize may go to the immediately higher value or to the immediately lower one, this result being shown by the corresponding indicator and the machine pays the resulting prize.

A second pushbutton enables the performance of this auxiliary play with two steps, in such a way that the initially obtained prize may be transformed into one which is two steps above in the scale of values, with the chance that the prize obtained may go down two steps in said scale.

There also is a timer circuit such that the complementary play situation is maintained over a preset time period. Once this period has elapsed, said play possibility is cancelled and the machine pays the prize obtained originally.

The machine also offers the possibility of a second auxiliary play for which said machine includes in its "drums," in addition to the pictures or graphs which show the combination, respective numbers the sum of which are converted into the number of "advances" to be provided to a row of letters which

form a word such as the word "MYSTERY" or any other. When it is possible to complete said word by means of the number of "advances" obtained, an auxiliary drum is illuminated. This drum should preferably be arranged so that it matches the set of drums through which the different combinations are obtained. This auxiliary drum will show a number indicating the number of unit "advances" which may be made in turn on said main drums by means of the corresponding buttons, so as to change the originally-obtained combination and try to obtain another one which has a direct prize.

This auxiliary drum, besides giving the possibility of direct advances over the main drums, the value of which is shown on the drum, also offers graphs corresponding to advances of numbers not reflected in said drum but are shown in a complementary indicator established in the machine's screen. This number shall preferably be included between one and ten.

Said complementary drum also includes a "mysterious" prize not shown directly on same and which, according to the machine's program, may be transformed into any of the prizes established in same, from the minimum to the maximum prize, which shall be delivered directly.

There also is the possibility that the stopping of this auxiliary drum determines the start-up of the main drums, up to a stopping situation in which these offer any

prize-determining combination, always between the minimum and maximum values, but with the peculiarity that in this case such prizes, in addition to being able to obtain them directly, enable the establishment of the first auxiliary play on plus or minus.

Finally, there is in the auxiliary drum another maximum prize-determining situation.

In order to supplement the following description and for further understanding of the characteristics of the invention, attached to this descriptive report and as part of same, there is a single page with drawings for, but not limited to, informational purposes. Said drawing shows a partial front view of an entertainment machine built with the improvements which are the objects of this invention.

Said drawing shows how the machine proposed by the invention includes a series of drums 1, each one carrying a series of symbols, as usual, capable of establishing prize-winning combinations - each one of these drums 1 being assisted by the corresponding push button 2 for their supposed stopping while push button 3 sets in motion said drums 1 after the corresponding coin has been introduced.

The screen on the machine will show, as usual, a series of indicators 4 relevant to the different prize-winning combinations and the respective prizes.

Starting from this known structure the improvements proposed by the invention are focused on the existence on the machine's of another series of indicators 5 for the respective values corresponding to the different prizes obtainable by the player so that a progressive scale going from the minimum up to the maximum value is established. In the example shown in the drawing, such values are: 25-50-75-100-150-200-250-300-350 and 500, but obviously these values can vary without any limit whatsoever.

Each one of these indicators 5 is assisted by a pilot light and when a prize-winning combination is obtained in drums 1, the pilot light corresponding to indicator 5 to the value obtained turns on.

Simultaneously another indicator 6 is activated, informing the player about the possibility of making a first auxiliary play consisting, as previously stated, of increasing the value of the prize obtained by one or two steps, with the chance of reducing it in the same proportion.

This will obviously be feasible when the prize obtained does not match the limit values.

To that end there are two push buttons 7 and 8, that enable to make such auxiliary play with lower or higher risk, that is, with the possibility of varying in one or two steps. An indicator 9 with the symbols (+1), (-1) and (+2), (-2) indicate the player, by illuminating, the results obtained after pressing the corresponding push button. After this, the machine will deliver the prize obtained according with the results of the complementary play made.

This auxiliary play is optional so that once indicator 6 has turned on and after a preset time, if the player has not actuated one of the push buttons 7-8, the machine will deliver directly the prize won in the main play.

The results of this auxiliary play do not depend on chance. The increase or reduction of the original prize will be duly programmed due to the fact that the machine provides at all times the pre-established percentage of prizes with respect to amount collected.

The machine also offers a second auxiliary play for which drums 1, in addition to the conventional symbols through which the different combinations are obtained also include respective numbers 10. When the combination obtained in drums 1 does not have a direct prize, also through the machine's programming circuit, the said numbers 10 are added and such result is transformed into a number of "advances" supplied to a row of letters 11 which conform a certain word.

When as a result of the advances obtained by adding the numbers 10, the progressive and full illumination of the row of letters 11 is obtained, obviously with the collaboration of the pilot's assisting each one of them, and this results in the illumination and start up of an auxiliary drum 12 determining a prize or a prize possibility, also auxiliary 12, a number such as the one shown in the drawing as reference 13 may appear, which implies that the player may make two advances on one or more of the drums 1 of the machine and through push buttons 2 in order to change the originally

obtained combination and try to converted into a prize-winning combination.

Said drum 12 may show a symbol indicating an unidentified number of advances, number which on the other hand is defined in an auxiliary indicator 14 in the machine's screen where values 15 are shown corresponding to the number of advances obtained. The illumination of these indicators is produced by the existing machine's control circuit program.

There is also the possibility that auxiliary drum 12 delivers an unidentified, in principle, "mysterious" prize which can vary between the maximum and minimum limit values. This is also controlled by the machine's program and varies as a function of the collection.

Said drum 12 can determine, when it stops, the actuation of drums 1 until a prize-winning combination is established, also corresponding to any of the foreseen values but with the particularity that in any case when such combination appears in the drum there exists the chance of playing the first auxiliary play and try to increase in one or two steps the prize obtained, running a similar risk of reducing the prize in the same extent.

Finally the stopping of auxiliary drum 12 can determine delivery of the maximum prize.

In any case, a considerable enhancement of the machine's attractive is obtained because the player has more participation in the development of the game.

Having described the object of this utility model and its different parts, it is

hereby stated that what constitutes the essence is formalized in the following:

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## CLAIMS

1.- IMPROVED ENTERTAINMENT MACHINE, which is made up of a series of "drums" bearing symbols capable of establishing multiple prize-winning combinations, essentially characterized in that its screen includes a series of indicators bearing graphs which reflect step by step the different values of the obtainable prizes. An auxiliary circuit is established in the machine's control circuit which, by means of the corresponding push buttons and when said circuits detects a prize situation, permits the variation in one or two steps, up or down, in order to increase the prize value with the chance that this may be reduced. The machine has the particularity of including an auxiliary indicator showing such possibility as well as a second auxiliary indicator showing the result determined by said auxiliary circuit after actuating the corresponding push button(s).

2.- IMPROVED ENTERTAINMENT MACHINE, according to claim one, characterized in that the "drums" include in addition to conventional combination graphs, numerical graphs related with an adding circuit which add up the numbers appearing on the screen after each

play. It has been foreseen that said addition is converted into a pulse train fed to an auxiliary indicator which is unloaded after each play and in which a level of pulses received is established. Once this level is reached, a signal is sent to the general circuit of the machine which in turn results in a new operational possibility either delivering direct prizes or giving the possibility of complementary prizes.

3.- IMPROVED ENTERTAINMENT MACHINE, according to the previous claims, characterized in that it includes an auxiliary drum which becomes operative when the supplied pulses reach said preset value. When said auxiliary drum stops, it provides the possibility of establishing a certain number of partial turns, corresponding to the sequence of graphs on main drums, through the corresponding push buttons. Said auxiliary drum also indicates the number of possible pulses through the numerical graphs that it has, or by means of the illumination of an indicator corresponding to a set of auxiliary pilots.

4.- IMPROVED ENTERTAINMENT MACHINE, according to the previous claims, characterized in that said auxiliary drum also includes a graph corresponding to a direct prize, comprised between the maximum and

minimum values deliverable by the machine, as well as another graph corresponding to a situation of said auxiliary drum in which the main drums supply system is connected with the resulting operational of same until these stop in a position corresponding to a certain prize-winning combination which can also vary between the limit value and according to the machine control circuit program.

5.- IMPROVED ENTERTAINMENT MACHINE, as has been described and claimed in this descriptive report, which is made up by twelve pages all of which are typed on one face only and is represented in the attached drawings.

Madrid, June 21, 198[illegible]

JULIO HERRERO.

p.p.

[signature]

ANCHOR 16111

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[drawing]

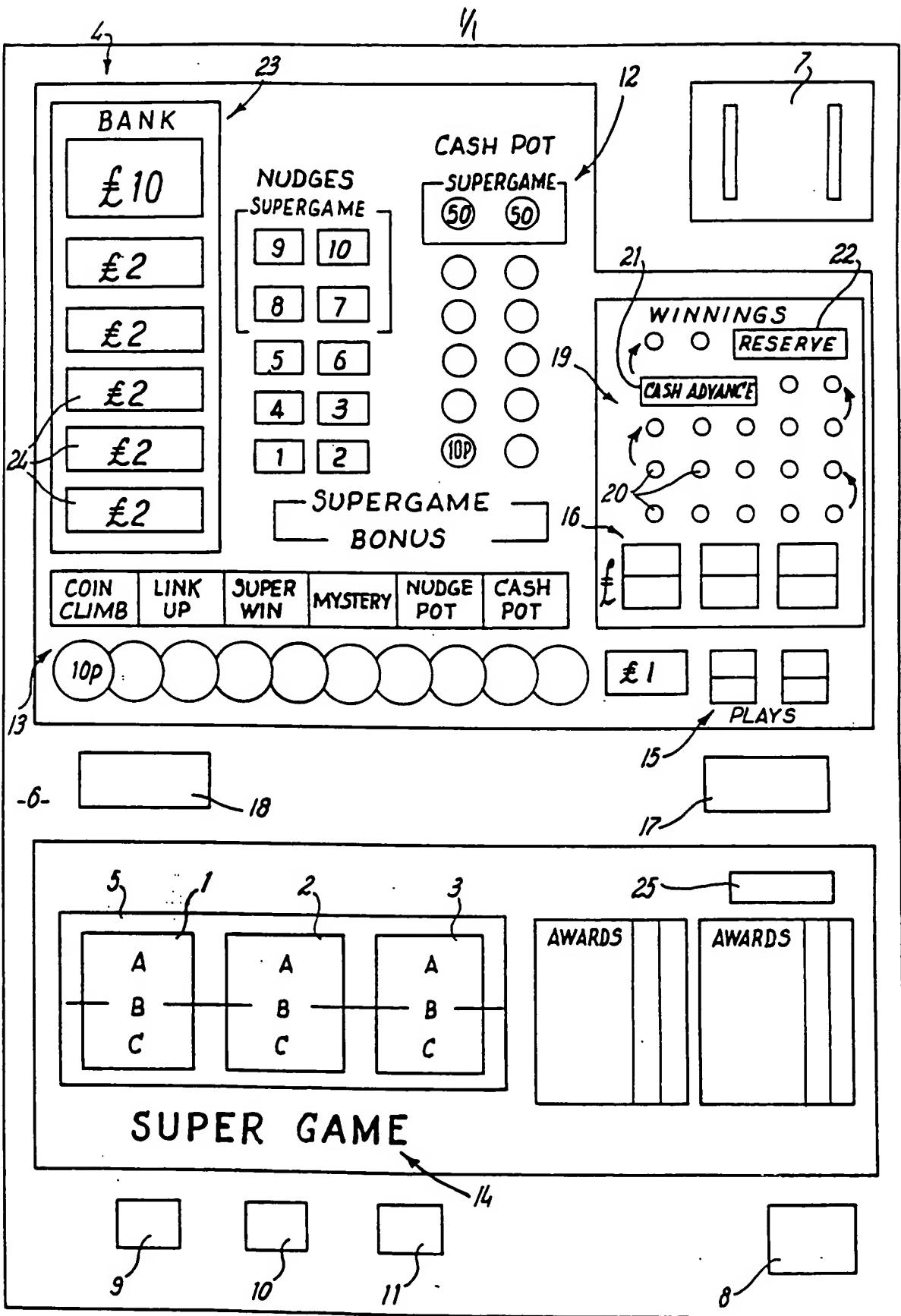
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### ENTERTAINMENT MACHINES

This invention relates to a coin- (or token-) operated entertainment machine of the kind which is operable to play games resulting in the selection and display of combinations of symbols and with which a win indication is given in the event that a symbol combination of a predetermined winning nature is obtained. The invention is more particularly, although not exclusively, concerned with such a machine which is a fruit machine and with which the displayed symbols (typically representations of fruit) are selected at random, for example, by rotation of reels or by change of a video display simulating the rotation of reels.

It is known to provide a fruit machine with a 'gamble' feature whereby, after attaining a win indication but before receiving an award (in the form of a cash payout) corresponding to the win, the player has the option of actuating a gamble device which can modify the award by increasing or reducing (or cancelling) it.

It is also known to provide a supplementary game feature whereby, after attaining a win indication in a main game, but before receiving an award corresponding to the win, the player has the option of playing a supplementary game (which may be of the same nature as the main game) using the attained win as a stake, and the player can increase or decrease his previously attained award depending on the outcome of the supplementary game.

These 'gamble' and 'supplementary game' features advantageously enhance the entertainment value of the machine. However, a limitation may be imposed on the enhancement in so far as there is a maximum

win value which can be awarded, whereby when this win value is attained there is no benefit to further use of the gamble or supplementary game features. Thus, on attaining a maximum award, if the player wishes to try to win further awards, he has to obtain a

5. payout of the maximum award and then put this as a fresh stake back into the machine. This tends to detract from the entertainment value of the machine and also can result in increased wear of the coin mechanism.

An object of the present invention is to provide a machine with

10. which the player can, with possible benefit to him, use attained winnings as a stake without requiring such winnings to be paid out and re-inserted, even when such winnings amount to a predetermined maximum award value.

According to the invention therefore there is provided a coin-

15. (or token-) operated entertainment machine having a game-playing device operable to play a primary game resulting in the selection and display of a combination of symbols, and an award counter having a predetermined maximum count thereto for recording an award value corresponding to an attained winning symbol combination, said game-
20. playing device also being operable to play a secondary game using at least part of such recorded award as a stake whereby the recorded award value is increased in the event that a win is attained in said secondary game, characterised by the provision of an overflow device operable to monitor an attained award value in excess of said
25. predetermined maximum count and in response to a predetermined said excess value to initiate a game-playing routine of enhanced win

likelihood.

- With this arrangement, even in the case where a maximum win value has been attained, there is still benefit to the player in playing further secondary games since there is the incentive of achieving
5. enhanced win capabilities in the event that the predetermined excess award value is attained. The enhanced win capability may come into effect when any excess award value is attained. Preferably however a target value has to be reached before the player is rewarded with the enhanced win capability.
10. In a particularly preferred embodiment, the overflow device includes a visual display device, such as a series of indicators which can be illuminated, whereby a visual indication can be given of the magnitude of the excess award value attained. The counter may also be arranged to give a visual indication of the magnitude of the recorded
15. count and thus may comprise a digital display device.

With regard to the said primary game, in addition to the selection of symbol combinations, provision may also be made for the award of bonuses and/or chance wins whereby the counter may also record award values corresponding to such bonus and/or chance wins.

20. With regard to the secondary game this may be of the same nature as the primary game. Preferably however the likelihood of winning on a secondary game is greater than the likelihood of winning on a primary game.

The stake for the secondary game may be a fixed amount which

25. may be the same as a fixed amount required to play a primary game. Alternatively, the stake may be a higher amount giving the possibility

of win multiplication. Provision may be made for successive secondary games to be played while there is sufficient win credit recorded by the counter.

In the enhanced win capability mode the routine may be such

5. that the player is presented with a simple game in which he has to operate a control to perform a chance operation resulting in either increase in or retention of the attained award. For example, the player may press a control button while a lamp is flashing whereby the award is increased if the button is pressed simultaneously with 10. illumination of the lamp. The likelihood of increasing the award may be 50% or approximately 50%. If the player fails to increase the award, the machine may revert to its normal primary or secondary, preferably primary, game-playing mode and further games can be played as long as there is sufficient game-playing credit.
15. The award value may represent monetary (or token) value and the player may have the option at any time of obtaining a payout of coins (or tokens) to the value recorded by the counter.

Most preferably the machine of the invention is a fruit machine

and the displayed symbols (which may be representations of fruit) are

20. selected at random as by rotation of reels (usually three or four reels) having such symbols marked around the periphery thereof, or by the operation of a vdu display simulating such rotation of reels or by the random illumination of symbols on areas of a display panel or otherwise.

25. The invention will now be described further by way of example only and with reference to the accompanying drawing which is a

diagrammatic view of part of the front of one form of an entertainment machine according to the invention.

The machine is a fruit machine having three reels 1, 2, 3 which are rotatable within a housing 4 behind a window 5 in a front panel

5. 6.

Each reel 1, 2, 3 has pictures of fruit (designated A, B, C) at 20 positions around its periphery, and rotation of each reel is effected and also arrested by a microprocessor-controlled stepping motor, the arrangement being such that the reel always comes to rest in precise 10. registration with the window. Each stopping position is identified by the microprocessor control circuitry in known manner.

In use, the machine is actuated by a player by insertion of one or more coins or tokens into a coin mechanism 7 and a starter button 8 is pressed to cause the three reels 1, 2, 3 to rotate for different 15. random periods of time before coming to rest. When the reels 1, 2, 3 come to rest, their stopping positions are identified and a win indication is produced in the event that the identified stopping positions correspond to the display of a predetermined winning combination of fruit (say three fruit of the same kind) at predetermined positions in 20. the window 5 (e.g. on a horizontal win line passing through the middle of three displayed fruit for each reel).

There is a respective player-operable button 9, 10, 11 for each reel beneath the window 5, for 'hold' and 'nudge' features. At the start of some games, as selected on a random basis, the buttons 9-11 25. are made available for hold operation and when so operated by the player the or each pertaining reel 1, 2, 3 is held against rotation

during the course of the ensuing game. At the end of some games, as selected on a random basis, the buttons 9-11 are made available for nudge operation and when so operated by the player the or each pertaining reel 1-3 is indexed through a number of steps (i.e. stopping 5. positions) as determined by the action taken by the player and within the limits of a total permitted number of nudge steps. Alternatively a player-initiated automatic nudge facility (which automatically nudges the reels through the optimum number of steps within the imposed limits) may be provided as described in Patents Nos. 2092797 and 10. 2144568.

In accordance with conventional practice the machine also includes various additional chance win features, whereby, for example, at the end of a game the player can be awarded additional 'nudges', or the contents of a jackpot 12 or other bonus or randomly selected win can 15. be made available to the player on a totally random basis, or in dependence on the advancement along a 'ladder' 13 (as indicated by illumination of successive 'rungs') or in dependence on attainment of selection of all letters of a 'name fill' word 14 (e.g. the name of the game, as indicated by illumination of all letters). In the latter respect 20. the advancement along the ladder 13 and/or the selection of the letters of the word 14 may be effected totally randomly or in dependence on the appearance of subsidiary indicia (such as numbers or letters) on the reels 1, 2, 3 on the win line.

Moreover, the machine has two LCD or LED digital displays 15 25. and 16, and two player-operable buttons 17, 18 respectively for win collection, and for secondary game selection (yet to be described).

The digital displays 15, 16 comprise respectively a monetary credit display 15 and an accumulated win display 16.

When coins are inserted into the machine the credit display 15 is appropriately incremented, and correspondingly this section is 5. appropriately decremented as credit is used up by playing games.

If the outcome of a game is a win having a corresponding monetary award the display 16 is incremented to show the value of the award, such value being the total of that derived from any winning symbol combination on the reels 1, 2, 3 and any chance win or bonus derived 10. from features such as the jackpot, the ladder and the name fill features.

The player now has the option of pressing the payout button 17 or the secondary game button 18. If the button 17 is pressed coins and/or tokens are paid out to the player equal to the win value shown on the display 16 and such display is correspondingly decremented 15. to zero.

If instead the player presses the other button 18 the display 16 is decremented by an amount equal to the cost of a game and a secondary game is now played using the decremented amount as a stake. This secondary game may be of the same nature as the primary 20. game (i.e. involving rotation of the reels 1, 2, 3 with the aim of obtaining a winning combination, together with actuation as appropriate of the chance win or bonus features). However, as an incentive, the awards may be enhanced. That is, winning symbol combinations may qualify for higher awards, the jackpot 12 may start from a partly 25. filled conditions, the word fill 14 may start partly filled, the ladder 13 may start at a higher rung etc.

If the player does not attain a win with the secondary game he can obtain a payout of the residue of his winnings or he can continue playing secondary games until his winnings have been consumed.

If the player wins, the value of the awarded win is added to the  
5. accumulated count shown on the display 16, and the player can obtain a payout or play further supplementary games as desired.

The display 16 is set for a maximum accumulated win value (say £2.00) and, when this is attained, the value of any further wins is monitored and displayed on an overflow device 19. This overflow  
10. device 19 comprises a series of indicators 20 which can be illuminated. The indicators 20 are illuminated successively along a predetermined path as excess win value is built up. If excess win value is reduced because supplementary games are played which do not result in wins, the monitored excess win value is appropriately decremented as  
15. represented by successive extinguishing of the indicators back along the predetermined path. If sufficient excess win value is generated, representing a predetermined target value, a 'cash advance' indicator  
21 is illuminated. Further generated excess win value results in  
22. further indicators 20 being illuminated, and finally a 'reserve' indicator  
20. 22. Any further excess value does not result in advancement beyond this 'reserve' indicator.

If the payout button 17 is operated when an excess value is indicated which is less than that necessary to reach the 'cash advance' indicator, the maximum award (say £2.00) is paid out, the monitored  
25. excess value is cancelled, and the display 16 is decremented to zero.

If the payout button 17 is operated when an excess value is

indicated which is equal to or greater than that necessary to reach the 'cash advance' indicator 21, the maximum award (say £2.00) is indicated in a 'bank ladder' 23 by illumination of the bottom 'rung' 24 marked with the award value, the display 16 is decremented to zero.

5. The player can now press the payout button 17 to obtain the value indicated in the bank ladder 23, or he can play a further game (after inserting further coins or tokens as necessary). This further game is played with a much enhanced likelihood of winning. For example, the chance of winning may be at least 50% and this may be
10. achieved by the game-playing system which intermittently flashes the next 'rung' of the 'bank ladder' 23. If the play button 8 is pressed simultaneously with illumination of the next rung, this next rung is fixedly illuminated and the player is credited with a further £2.00 win and the procedure is then repeated for the next rung of the ladder.
15. In this way it is possible for the player to build up successive £2.00 values in the bank 23 until a maximum total of £10.00 is reached. The £10.00 is then paid out and the machine re-set. If at any time the play button 8 is not pressed simultaneously with the illumination of the flashing rung, the machine reverts to a normal reel-spin mode
20. (in primary or secondary format), and the winnings corresponding to the existing illuminated rungs of the bank ladder 23 can be collected by the player.

When the play button 8 is pressed in the enhanced win likelihood mode, whether the result is advancement up the bank ladder 23, or

25. reversion to the reel-spin mode, credit is decremented by the predetermined cost of a game. The arrangement is such that the

likelihood of the player pressing the button 8 simultaneously with illumination of the next rung of the bank ladder is 50% or approximately 50%.

With the arrangement described above the player can continue  
5. playing, with benefit, beyond a maximum £2.00 winning level, without having to re-insert coins into the machine.

It is of course to be understood that the invention is not intended to be restricted to the details of the above embodiment which are described by way of example only.

CLAIMS

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1. A coin- (or token-) operated entertainment machine having a game-playing device operable to play a primary game resulting in the selection and display of a combination of symbols, and an award counter having a predetermined maximum count thereto for recording an award value corresponding to an attained winning symbol combination, said game-playing device also being operable to play a secondary game using at least part of such recorded award as a stake whereby the recorded award value is increased in the event that a win is attained in said secondary game, characterised by the provision of an overflow device operable to monitor an attained award value in excess of said predetermined maximum count and in response to a predetermined said excess value to initiate a game-playing routine of enhanced win likelihood.
2. A machine according to claim 1 characterised in that the enhanced win capability comes into effect when a target value has been reached.
3. A machine according to claim 1 or 2 characterised in that the overflow device includes a visual display device whereby a visual indication can be given of the magnitude of the excess award value attained.
4. A machine according to any one of claims 1 to 3 characterised in that the counter is arranged to give a visual indication of the magnitude of the recorded count.
5. A machine according to any one of claims 1 to 4 characterised in that provision is made in the said primary game for the award of bonuses and/or chance wins and the counter is arranged also to record award value corresponding thereto.

6. A machine according to any one of claims 1 to 5 characterised in that the likelihood of winning on a secondary game is greater than the likelihood of winning on a primary game.
  7. A machine according to any one of claims 1 to 6 characterised in that the stake for a secondary game is higher than that for a primary game.
  8. A machine according to any one of claims 1 to 7 which is a fruit machine and the displayed symbols are selected at random by rotation (or simulated rotation) of reels.
  9. A machine according to claim 8 characterised in that symbols are also selected in a secondary game in like manner to a primary game.
  10. A machine according to claim 8 or 9 characterised in that the enhanced win likelihood game involves the operation of a control button in relation to a flashing light arrangement whereby a win is achieved if the button is operated simultaneously with the illumination of a win display.
  11. A machine substantially as hereinbefore described with reference to and as illustrated in the accompanying drawing.
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